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AUTHOR

Feldman, Kenneth A.

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ABSTRACT

The purpose of this paper is to describe and analyze some of the major approaches that are taken in the study of student change and stability. The approaches discussed are (1) the atheoretical approach, where the outcome is explored without a theoretical orientation; (2) presumed goals of higher education, where the outcome is cast in terms of the avowed objectives of higher education; (3) the developmental or growth approach, where changes are placed with a framework of personality development; (4) life-cycle movement within the general social system, where the emphasis is on the processes and results of channeling, preparing, ensuring and certifying youth for certain occupational and social roles in the larger society; and (5) social organizational impacts, where the nature and direction of student change, stability or outcome is analyzed as a function of the distinctive effects of different college environments. (AF)



SOME APPROACHES TO THE STUDY OF CHANGE AND STABILITY OF COLLEGE STUDENTS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE OFFICE OF EDUCATION

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Kenneth A. Feldman

State University of New York at Stony Brook

This paper was prepared for the 55th Annual Meeting of the American Educational Research Association (February 4-7, 1971). New York City). It is an extension of materials in Feldman (1969, 1970).



Studies of change and stability of students during their college years show relatively wide variation in the specification of attributes thought to be affected by college, in the theoretical stance taken on the nature and direction of college impacts, and in the interpretation of similarities or differences between college-class levels. The purpose of this paper is to describe and analyze some of the major approaches that are taken in the study of student change and stability.

To begin with, it is not necessary for a study to have an explicit theory concerning which dimensions of students are most likely to be affected by colleges in what ways. The investigator may in effect say something like the following: "Here are some interesting dimensions that may (or may not) be affected by the college experience. To find out, let's compare college-class level (say freshmen and seniors)." Typically, in this approach, predictions about the nature of change (including the direction of net or average change) are not made. There are other studies that do make predictions about the nature and amount of impacts, but the means of doing so is essentially actuarial rather than theoretical. Prediction is based upon the trends of results of other research past and concurrent. The expectations of results are usually not grounded in a theoretical orientation or nomological network.²

Other atudies use theoretical frameworks with which results are anticipated and predictions are made. One such framework derives from the presumed goals of higher education. That is, given the goals of higher education—as specified by the investigator—students are expected to change in certain ways. The nature of this expected change may be viewed as obvious and not in need of defense, either theoretically or functionally. Or assertions about change may be more polemically toned, perhaps couched in normative terms of "ought to"; the goals of higher education must be such and such, and students ought to change in these and these ways. Likewise, the goals posited may vary in the degree of consensuality of general acceptance.



Predictions about, and interpretations of, changes during college are placed by some investigators into a framework of personality development. Certain types of freshman-senior differences are seen as more than "neutral" differences. Rather, they are viewed in terms of the degree to which the individual has attained higher levels of maturation. This developmental or growth approach works best when change in a given personal trait or attitude unambiguously represents a certain kind of change in terms of development and maturity. Thus if increases in some variable, say "x", invariably represent increases in maturity, and if such increases occur for most college students, and finally if these increases can be attributed legitimately to the college, then the school has been responsible for increases in maturity and the development of the student. I: would then follow that if the college causes decreases in "x", it is responsible for arresting development. However, personality and attitudinal change are often not easily and unambiguously interpreted in terms of development and maturity. That is, certain personality and attitude change can sometimes as plausibly (or nearly as plausibly) be argued to be indicative of decreasing maturity or arrested growth as increasing maturity. To take only one of a number of examples, an increased score on a "sociability" or "gregariousness" scale could be taken as an increase in maturity -- in the sense of decreased interpersonal defensiveness. That is, personality change is in the direction of relationships that are less anxious and more friendly, apontaneous, warm and respectiful. On the other hand, increase on these scales might be interpreted as decrease in maturity -- in the sense of decreased independence from the "tyranny" of the peer group and increased superficiality of relationships with many persons rather than increase in the intimacy and depth of relationships within a delimited range of friends. For other examples, see Table 1.

It is true that these sorts of confusions can largely be resolved by working within a theoretical framework--such as Sanford's (1956) "growth trends"; Chickering's (1969) "vectors of development"; or Heath's (1965, 1968)



TABLE 1

Some examples of possible interpretations of personality change in terms of change of level of maturity. (This table is based in part, on materials in Chickering, 1969; Heath, 1965, 1968; Izard, 1962; Sanford, 1962; Webster, 1956; and White, 1952.)

Scale or Index	Direction of Change	Interpretation	
		Increase in Maturity	Decrease in Maturity
need for "deference"	decrease	increase in emancipation from authority figures, conformity pressures, and "other-directed" behavior	1b) increase in irrational rebellion and lack of consideration for others
	increase	1c) obverse of 1b	1d) obverse of 1a
need for "abasement"	decrease	2a) increase in feeling of adequacy; decrease in susceptibility to feelings of guilt and inferiority	2b) increase in self-centeredness and loss of superego controls
	increase	2c) obverse of 2b	2d) obverse of 2a
need for "autonomy"	increase	3a) increase in capacity to find rewards and satisfactions from one's own comings and goings; increase in ability to make one's own decisions independent of external pressures	3b) increase in social irresponsibility; decrease in awareness of interdependence with others
	decrease	3c) obverse of 3b	3d) obverse of 3a
readiness to "express impulses" rather than "excercise restraint".	increase	4a) decrease in repressive and rigid self-control; increase in openness to experiences and awareness of one's range of feelings; increase in "genuine" freedom of emotions, with flexible control	4b) increase in organization of personality around personal need-dominated (autocentric) forms rather than internalized reality-given (allocentric) forms; increase in drive-determined behavior rather than behavior controlled by cognitive types of structures
	decrease 4	4c) obverse of 4b	4d) obverse of 4a
"sociability" and "gregariousness"	increase	5a) decrease in interpersonal defensiveness; increase in freeing of personal relationships—with movement in the direction of relationships that are less anxious and more friendly, spontaneous, warm and respectful	5b) decrease in independence from the "tyranny" of the peer group; increase in the superficiality of relationships with many persons rather than increase in the intimacy and depth of relationships within a delimited range of friends
	decrease	5c) obverse of 5b	5d) obverse of 5a

This table appeared originally in Feldman (1969, 1970).



"model of a maturing person"--in which there is a specification <u>beforehand</u>
of what sorts of changes are to represent increasing maturity and which ones
are not. But even with such theoretical frameworks, there still seems to be
a tendency to reinterpret unexpected results (that ostensibly indicate
decreasing maturity) as increasing maturity after all.

As an example, consider Sanford's (1956) finding that as a group senior women at Vassar appeared to be more neurotic than freshman women-as determined by both cross-sectional and longitudinal responses to interviews, questionnaires, psychological tests and other instruments of personality assessment. Seniors showd more disturbance with respect to ego identity, more dissatisfaction with themselves, more apparent vaciliation between different patterns, and more conscious conflict about what to be. In interpreting these results, Sanford implies that the orientation of the average senior could actually be seen as advance over her freshman stance, as follows:

The seniors, in our view, are striving to include more in-they are on the road to becoming richer and more complex personalities; they are striving for stabilization on a higher level. What distinguishes seniors from freshmen is not just the latter's relative freedom from conflict and uncertainty, but their greater narrowness, perhaps rigidity, of identity, and their greater dependence upon external definition and support (p. 76).

Seniors show more self-insight, more 'Inher life and-let's fact it-they show more "neuroticism" of a certain kind. At least they show a greater willingness to admit, or perhaps to take a certain satisfaction in admitting, conflict, worries, doubts, fears, faults, psychosometic symptoms.... But at least, it seems, seniors show fewer repressive mechanisms of defense (p. 78).

To given another example, most investigators find that seniors typically have increased awareness of their emotions and increased freedom of expression in words or behavior as indicated by higher scores on such measures as the Impulse Expression Scale of the Omnibus Personality Inventory (Feldman and Newcomb, 1969). This finding can be interpreted as indicative of increasing maturity and development (see, for example, Chickering, 1969). Unexpectedly finding that students at Goddard, if anything, decreased on the Impulse Expression Scale, Chickering writes that "the higher entering mores for the



Goddard students suggested that they were ... already awakened and open to experience. For them the principle developmental task was to achieve increased self-control, increased integration of emotions and other elements of personality" (p. 43).

As a final example, consider Heath's finding that a sample of freshmen at Haverford actually seemed to be less "autonomous" and emotionally self-sufficient in their relationships after seven months at the college than they were when they entered. In explaining this finding, Heath first points out that the assessment of the maturity of development on a dimension depends upon the stage in the adaptive sequence or the level of equilibrium at which it is observed. Thus within the context of their maturing generally, the apparent "regression" in autonomy was necessary to become more autonomous. Similarly, the apparent "integration" of the entering freshmen's talents, values, and interests may have been a less mature form of integration than the "disintegration" the same men experienced later in the year:

To continue their development the men had to form an even more mature integration that assimilated their emotional and social needs into their images of themselves as cool professionals. Their "disintegration" was more "mature" than their earlier integration (p. 253).

I would not want to argue that these interpretations (or others like them) are incorrect; they sound plausible enough to me. Also, the fact that the interpretations are post-hoc need not be too bothersome. Behavioral science often progresses, after all, by interpreting unexpected results, with consequent theoretical refinement and verification. I do want to speculate, however, about what it is that is so compelling about the personality development framework that even in the face of what might seem to be nonsupporting evidence, increasing maturity is posited. Part of the answer, I think, resides in the fact that a developmental or growth framework has built into it the notion of "progress" (in the sense of progress toward increased maturity). And the notion of progress generally receives high valuation in our society. Perhaps linked with this positive



valuing of progress is an underlying feeling that growth is "natural" and development is "good" in some moral sense. In his study of the development of students at Harvard, Perry (1970) makes these things explicit, as follows:

Growth is so "normal" as to suggest that it is "natural." From this context the few instances /in our data/ in which the balance seemed to favor conservation emerged for us as exceptions requiring a second-level explanation. That is, we tended to assume that for these students too, the "normal" or "natural" state would be a balance in favor of growth, and that some kind of experience threatening to integrity had somehow strengthened the forces of conservation to a point where they frustrated the impetus to progress (p. 53).

The work "growth" will be used /in our study in the usual way to refer to progress in the development /of persons. However, since the word "growth," when applied as a biological metaphor in psychological and social contexts, necessarily picks up assumption about values, it is well to acknowledge them at the outset.

In any sphere of human development, perceptual, intellectual, social, emotional, and so forth, the word "growth" suggests that it is better to grow than to arrest growth or to regress. Where the development is laid out as a kind of scale on which a person's position and rate of progress can be measured, then a value becomes assigned to a person in an advanced position relative to others of his age. A similar value is assigned to a person with a relatively high rate of growth. Where progress in the development can be assumed to involve not only "natural" endowments but such "personal" attributes as will, effort, and courage, growth becomes a moral issue. An advanced person showing a high rate of growth becomes somehow a "better" person (p. 44).

The values built into our scheme are those we assume to be commonly held in significant areas of our culture, finding their most concentrated expression in such institutions as colleges of liberal arts, mental health movements and the like. We happen to subscribe to them ourselves. We would argue, for example, that the final structures of our scheme express an optimally congruent and responsible address to the present state of man's predicament (p. 45).

I am making the assumption that this orientation, which Perry makes explicit, is embodied in one way or another, and in one degree or another, in most other developmental theories about college students. If this is true, then I imagine that it would be understandable and acceptable to investigators using this framework that some minority of students might not grow, progress, or develop, but it would be less comprehensible (as well as unpleasant and upsetting I presume) to find that the majority of students (or the "average" student) so regressed. This would especially be the case when the college meconceived as effecting and affecting these changes. In value terms, this would mean that the school are helping to produce people who are

somehow "less good" than when they entered. While it is conceivable that this indeed is true, I suspect that the thrust of developmental frameworks works against interpreting change in this way.

I want to turn to another kind of theoretical orientation, one which tends to be either indifferent, or, in some cases, antagonistic to developmental frameworks. This theoretical orientation employs a social-structural or systems analysis. Theorists concentrate on the distinctive life-cycle and social-system context of college students by emphasizing the societal functions of higher education. The impact of college is analyzed in terms of the movement of students within a general, national social system in which college is a subsystem in interaction with other subsystems.

One part of this approach concerns itself with the certification and hypothesized gate-keeping function of higher education. Rather than focusing on changes in individual traits and attributes (or lack of such changes), the focus is on the ways in which colleges certify students for certain social and occupational positions in the world of the middle and upper-middle class, channels them in this direction, and to some extent ensures them of entrance to such positions. In the words of Riesman and Jencks (1962) the "college is an initiation rite for separating the upper-middle from the lower-middle class, and for changing the semi-amorphous adolescent into a semi-identified adult.... [Colleges stand] as the watch dogs of the upper-middle class ..."

(p. 78). Thus colleges are seen as engaging in sorting and sifting activities which creates a "social sieve" to help guard the gates to higher status levels within the social system (Jencks and Riesman, 1968).

When personality, attitudinal, or behavioral change is discussed within a certification or gate-keeping context, it generally is done in terms of how colleges-wittingly or unwittingly--prepare students for their new adult roles in given social accounts. As Wallace (1964) puts it, the of college "is to shape students toward statuses and roles for which they have never before been



sligible" (p. 303). The social preparation or shaping discussed in this approach includes assistance in making the break from family and local community and indeveloping an independence of spirit that is useful in our highly mobile society. Also, although it is not part of the formal curriculum. college students learn the kinds of manners, poise, social skills, cultural sophistication, and values that will be of use to them in their adult roles in the middle and upper-middle class social structures. Moreover, they usually extend their heterosexual interests and feelings in preparation for courtship and marital decisions. College helps young men and women to acquire the necessary personal attributes to be (as well as to choose) "culturally adequate" marriage partners for the social and occupational positions they will occupy. Students also learn a number of organizational skills, attitudes, and motivations that are necessary for success in the typical middle class and upper-middle class occupational world--including the general abilities and motivations needed to meet deadlines, start and finish tasks, juggle several things at once and keep them straight, and budget one! time and energy. Becker (1964) makes the further intriguing suggestion that the college student, as a recruit into the middle-class world, must even learn to attach his own desires to the requirements of the organization in which he becomes involved. He must learn, in short, "institutional motivation" -- wanting things simply and only because the institution in which he participates says these are the things to want. Becker contends that the college experience provides much practice in this linking of personal and institutional desires.

As students progress through college, they are supplied with more than the skills, motives, and attitudes that they might need in their future positions. In addition they have attached to them "new and validated social statuses (in the positional rather than hierarchical sense) to which the new personal qualities are appropriate" (Meyer, 1971). The individual student is incorporated into new social positions, after which he is



routinely motivated and encouraged to take on the qualities appropriate to these positions. As a student progresses through college, those around him-meachers, peers, parents, the general community within and outside the college, etc .-- define and label him according to the new positions he occupies in college as well as by the positions he hopes to accupy when he leaves college. That is, he is an upperclassman rather than a lowerclassman, a sociology major rather than a fine arts major, a would-be lawyer rather than a would-be plumber, and so forth. Moreover, he is given opportunities to engage in and practice behaviors that were previously either not open to him, not particularly feasible, or not easily doable (given his previous positions). As new social identities are pressed and impressed upon him, and as he is given the structural opportuniting to practice and enact their behavioral implications, the student may well begin to conceive of himself as being a different person from what he once was. It may be hypothesized in addition that any change in overall self-conception in turn leads to changes in a variety of more : specific personality and attitudinal attributes.

The extreme version of this social labeling orientation would assert that the imputation of social identity by others always comes first, followed by change in the students general self-conception, and only then resulting in changes in attitudinal and personality traits. More probably, however, there is an intertwining of social labeling and personality or behavioral change; and like the old chicken and egg riddle it is not clear which comes first.

As other come to view and act differently toward the student (for whatever reasons, including the fact that he may be behaving differently), as they redefine what he is, as they help him search for and even force on him new social identities and anticipated adult positions, he tends to change in self-conception and in personal attributes. But this in turn reinforces, legitimates, and extends others' views and behavior toward him--and so the cycle continues.



Of course the student does not need to agree that an imputed social

identity appropriate characterizes him. People vary in the degree to which they accept any particular identity that is being imputed to them. 5 Further, it is more than a matter of merely accepting or rejecting a social label. Rather, identity bargaining may be involved. That is, students negotiate with one antoher and those around them (teachers, parents, etc.) about who they are and who they will be. 6

Thus the social labeling approach that posits temporal primacy of identity imputation seems too extreme. However, it is useful as a dramatic contrast to what might be called a trait approach to the study of college impacts. In this trait approach colleges are seen as first inducing or effecting change in a variety of different traits or attributes of the student, which somehow "add up" to produce a different person--say an "educated man," a "mature young adult," or a "liberal person."

To recapitulate, in discussing general life-cycle movement of students within the national social system, an investigator may concentrate on processes of certification and gate-keeping, or on specific changes in students' skills, attitudes, personality traits, and behaviors, or on more general changes in identity. For all intents and purposes, the development or growth of personality, in terms of increasing maturity, is ignored. At least it is not seen as problematic. If one wanted to tie this sort of theorizing into a developmental framework, it would be tempting to assume that what one learns or becomes in order to move into and function competently in middle and upper-middle class roles automatically entails increases in maturity. But this assumption is a restrictive one, tieing maturity as it does to given social structures and time periods. Moreover, certain changes that may be prompted by moving into new positions or by anticipating future roles may imply nothing about development; they simply lie outside the developmental (growth) framework. Even within a developmental framework, it is possible that changes prompted by new roles in college and by anticipation of future adult roles actually hinder personality growth and development. For instance,

if Becker is right that college students learn "institutional motivation," most developmental theories would probably consider such a change to be a decrease in maturity.

In the general theoretical approaches described so far for predicting and interpreting freshman-senior change and stability—the avowed goals and functions of higher education; personality development; and life-cycle movement within a social system—the multidimensionality and complexities of colleges tend to be a secondary (although not necessarily an unimportant) consideration. To oversimplify the matter somewhat, the analysis of characteristics of colleges is contingent upon interest in their correlation with degree of success, effectiveness, or efficiency in (1) inculcating the presumed or desired goals of higher education, (2) facilitating rather than impeding increased maturity and personality development, or (3) channeling, ensuring, and preparing persons for certain occupational and social roles in the larger social system.

The final approach that I want to mention more or less reverses the general tack just described. It is social organizational in nature, and concentrates initially and primarily on the variation among colleges. The emphasis is on describing, analyzing, and measuring differences in organizational arrangement; the interrelationships among college subsystems; the content of, and degree of consensus about, goals; the consistency of normative pressures; social climate; opportunity structures; and the like. Differential student change and stability is then inferred directly in terms of the differences among colleges, rather than in terms of the "preconceived" notions of the three approaches described above. In varying degrees the work of Astin (1963a, 1963b, 1964, 1965, 1968a, 1968b; Astin and Panos, 1969), Pace (1964; Pace and Baird, 1966); Stern (1962a, 1962b, 1966, 1970); and Bidwell and Vreeland (1963; Vreeland) fall within this approach. The social organizational approach has the important value of focusing on just how college environments vary and of conceiving and predicting differential impacts directly in terms



of this variation.

Each of the theoretical approaches described herein is valuable for different reasons. Each indeed may be necessary to the study of change and stability during college, but no one of them is sufficient. The next step is to specify more completely the conditions under which it is fruitful to use one approach rather than another. It is also of particular importance to explore the interfaces among these approaches as well as the ways in which they can be combined or integrated in the analysis of college impacts.



FOOTNOTES

- 1. For two examples of this approach, see Lehmann (1963) and Stewart (1964).
- 2. See Beach (1966), Bugelski and Lester (1940), and Tyler (1963).
- See Feldman (1969, pp. 211-212).
- 4. See Baur (1965), Becker (1964), Becker, Geer and Hughes (1968), Coleman (1966), Jencks and Riesman (1968), Meyer (1970, 1971), Riesman and Jencks (1962), Thielens (1966), Trow (1959), and Wallace (1964, 1965, 1966).
- 5. See Lofland (1969) for an excellent discussion of some of the sociological and social psychological determinants of individual acceptance of imputed identities.
- 6. For theoretical statements about the processes involved in identity bargaining and negotiation, see Weinstein and Deutschberger (1964) and McCall and Simmons (1966).
- 7. For instance, in analyzing charges in identity, Strauss (1959) refers to "transformation" of identity rather than "development" of identity. Strauss maintains that "development" is usually viewed in one of two ways. The first is as movement toward a final goal or advancement along certain lines or in regard to certain tasks; there is an assumption of fixed goals or norms against which aspirants' movements can be chartered. The second involves the conception that although a person may seem to change considerably, the essential or "core" person is assumed to be the same. Whether development is thus viewed as attainment or as sets of variations on basic themes, Strauss argues that the observer of the developmental patters is omniscient in that he knows the end against which persons are matched or he knows the basic themes on which variations are composed. Since neither orientation "captures the open-ended, tentative, exploratory, hypothetical, problematic, devious, changeable, and only partly-unified character of human courses of action" (p. 91), Strauss prefers to conceive of identity changes as a series of related transformations of identity (which does allowconsideration of these matters).



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REFERENCES

- Astin, A. W. Differential college effects on the motivation of talented students to obtain the Ph.D. <u>Journal</u> of Educational Psychology, 1963, 54, 63-71. (a)
- Astin, A. W. Undergraduate institutions and 'production of scientists.

 Science, 1963, 141, 334-338. (b)
- Astin, A. W. Personal and environmental factors associated with college dropouts among high aptitude students. <u>Journal of Educational Psychology</u>, 1964, 55, 219-227.
- Astin, A. W. Effect of different college environments on the vocational choices of high aptitude students.

 Journal of Counseling Psychology, 1965, 12, 28-34.
- Astin, A. W. Personal and environmental determinants of student activism.

 Measurement and Evaluation in Guidance, 1968, 1, 149-162. (a)
- Astin, A. W. Undergraduate achievement and institutional "excellence." Science, 1968, 161, 661-668. (b)
- Astin, A. W., & Panos, R. J. The educational and vocational development of college students. Washington, D.C.: American Council on Education, 1969.
- Baur, E. J. Achievement and role definition of the college student. U.S. Department of Health, Education, and Welfare Cooperative Research Project No. 2605. Lawrence, Ka.: University of Kansas, 1965.
- Beach, L. R. Personality change in the church-related liberal arts college.

 <u>Psychological Reports</u>, 1966, <u>19</u>, 1257-1258.
- Becker, H. S. What do they really learn at college? <u>Trans-Action</u>, 1964, <u>I</u>, 14-17.
- Becker H. S., Geer, B., & Hughes, E. C. <u>Making the grade: The academic side of college life</u>. New York: Wiley, 1968.
- Bidwell, C. E., & Vreeland, R. S. College education and moral orientations:
 An organizational approach.

 Administrative Science Quarterly, 1963, 8,
 166-191.
- Bugelski, R., & Lester, O. P. Changes in attitudes in a group of college students during their college course and after graduation. <u>Journal of Social Psychology</u>, 1940, 12, 319-332.
- Chickering, A. W. Education and identity. San Francisco: Jossey-Bass, 1969.
- Coleman, J. S. Paer cultures and education in modern society. In T. M. Newcomb, & E. K. Wilson (Eds.), College peer groups: Problems and prospects for research. Chicago: Aldine, 1966. Pp. 244-269.
- Feldman, K. A. Studying the impacts of colleges on students. Sociology of Education, 1969, 42, 207-237.



- Feldman, K. A. Research strategies in studying college impact. ACT Research
 Report No. 34. Iowa City, Iowa: American College Testing Program, 1970.
- Felden, K. A., & Newcomb, T. M. The impact of college on students. San Francisco: Jossey-Bass, 1969.
- Heath, D. H. Explorations of maturity: Studies of mature and immature college men. New York: Appleton-Century-Crofts, 1965.
- Heath, D. H. Growing up in college. San Francisco: Jossey-Bass, 1968.
- Izard, C. E. Personality change during college years. Unpublished manuscript, 1962.
- Jencks, C., & Riesman, D. The academic evolution. New York: Doubleday, 1968.
- Lehmann, I. J. Changes in critical thinking, attitudes, and values from freshman to senior years. <u>Journal of Educational Psychology</u>, 1963, 54, 305-315.
- Lofland, J. Deviance and identity. Englewood Cliffs, N.J.: Prentice-Hall, 1969.
- McCall G. J., & Simmons, J. L. <u>Identities and interactions: An examination of human associations in everyday life</u>. New York: Free Press, 1966.
- Meyer, J. W. The charter: Conditions of diffuse socialization in schools. In W. R. Scott (Ed.), Social processes and social structure: An introduction to sociology. New York: Holt, 1970. Pp. 564-578.
- Meyer, J. W. The effects of the institutionalization of colleges in society. In K. A. Feldman (Ed.), College and student: Selected readings in the social psychology of higher education. Elmsford, N. Y.: Pergamon, 1971, in press.
- Pace, C. R. The influence of academic and student subcultures in college and student subcultures in college and university environments. U. S. Department of Health, Education, and Welfare Cooperative Research Project No. 1083. Los Angeles, Calif.: University of California, Los Angeles, 1964.
- Perry, W. G., Jr. Forms of intellectual and ethical development in the college years: A scheme. New York: Holt, 1970.
- Riesman, D., & Jencks, C. The viability of the American college. In N. Sanford (Ed.), The American college: A psychological and social interpretation of the higher learning. New York: Wiley, 1962. Pp. 74-192.
- Sanford, N. Personality development during the college years. Personnel and Guidance Journal, 1956, 35, 74-80.
- Sanford, N. Developmental status of the entering freshman. In N. Sanford (Ed.), The American college: A psychological and social interpretation of the bigher learning. New York: Wiley, 1962. Pp. 253-282.



- Stern, G. G. Environments for learning. In N. Sanford (Ed.), The American college: A psychological and social interpretation of the higher learning. New York: Wiley, 1962. Pp. 690-730. (a)
- Stern, G. G. The measurement of psychological characteristics of students and learning environments. In S. Messick, & J. Ross (Eds.), Measurement in personality and cognition. New York: Wiley, 1962. Pp. 27-68. (b)
- Stern, G. G. Studies of college environments. U.S. Department of Health, Education, and Welfare Cooperative Research Project No. 378. Syracuse University, 1966.
- Stern, G. G. People in context: Measuring person-environment congruence in education and industry. New York: Wiley, 1970.
- Stewart, L. H. Change in personality test scores during college. <u>Journal of Counseling Psychology</u>, 1964, 11, 211-230.
- Strauss, A. Mirrors and masks: The search for identity. Glencos, Ill.: Free Press, 1959.
- Trow, M. Cultural sophistication and higher education. In Selection and educational differentiation. Berkeley, Calif.: Field Service Center for the Study of Higher Education, University of California, 1959. Pp. 107-124.
- Tyler, F. T. A four-year study of personality traits and values of a group of National Merit Scholars and Certificate of Merit recipients. Center for the Study of Higher Education, University of California, Berkeley (mimeo), 1963.
- Wallace, W. L. Institutional and life-cycle socialization of college freshmen. American Journal of Sociology, 1964, 70, 303-318.
- Wallace, W. L. Peer influences and undergraduates aspirations for graduate study. Sociology of Education, 1965, 38, 375-392.
- Wallace, W. L. Student culture: Social structure and continuity in a liberal arts college. Chicago: Aldine, 1966.
- Webster, H. Some quantitative results. <u>Journal of Social Issues</u>, 1956, 12, 29-43.
- Weinstein, E. A., & Deutschberger, P. Tasks, bargains, and identities in interaction. Social Forces, 1964, 42, 451-456.
- White, R. W. Lives in progress: A study of the natural growth of personality. New York: Holt, 1952.

